

REMARKS

Claims 1-3, 5-20 and 24-31 are currently pending in the application. Claims 4 and 21-23 were previously cancelled. Claims 1-3, 5-20 and 24-31 were rejected by the present Office Action. These rejections are respectfully traversed.

The Applicants acknowledge the telephone calls between the Examiner and Susan Moon of the office of the undersigned on January 13, 2009 and 19, 2009. During these calls, the Examiner proposed certain changes to the claim language. The Applicants are grateful to the Examiner for these suggestions.

Accordingly, in order to facilitate prosecution, the Applicants have amended the independent claims of the present application to further clarify these aspects of the invention. Dependent claims 2-3, 5-20, 25, 28, and 31, have also been amended to maintain consistency with the independent claims and for editorial reasons.

These amendments to the claims are supported throughout the specification, including at paragraphs [0015] through [0019]. The amendments are made to facilitate prosecution and are made without prejudice to the Applicants' right to assert the claims in this or other applications at a later time.

The Applicants will now briefly address the present rejections.

REJECTIONS UNDER 35 U.S.C. § 103(a)

Claims 1-3, 5-20, and 24-31 were rejected under 35 U.S.C. 103(a) as being unpatentable over Mullendore et al. (U.S. Publication No. 2003/0185154) in view of Kaul et al. (U.S. Publication No. 2005/0050211).

These rejections are respectfully traversed.

Mullendore and Kaul do not teach the elements of the claims, either alone or in combination.

Various embodiments of the present application concern mechanisms and processes for improving the speed of transmitting large amounts of data over an intermediary high latency network. The switches providing this functionality modify the values in OX_ID and RX_ID exchange identifier fields in the course of performing these functions.

As described in the specification and as is well understood in the art, exchange identifiers are generally not used by switches at all. They are generally used by end devices to identify separate sessions or transactions that the end devices are carrying on between each other:

[0015] To identify an FC device, Fibre Channel Identifiers (FCIDs) are used. A transaction between an FC host and a target is referred to as an exchange. In a typical Fibre Channel network, there are many Hosts and targets. Each Host may initiate many read and/or write operations. *For the hosts and targets within a network to keep track of the various transactions between each other*, two fields are available in the Fibre Channel header for all SCSI Command, Data, Response, and Transfer Ready frames. *The first field is called the Originator Exchange Identifier or OX_ID. The second field is called the Receiver Exchange Identifier or RX_ID. The Host relies on the OX_ID to maintain its local state and the target relies on the RX_ID to maintain its local state.*” (Specif., para. [0015] (emphasis added).)

A particular Host and target in a data storage system may have multiple transactions (for example, read and write requests) occurring between them at any given time. The exchange identifiers are fields provided in a FC header to allow a Host and target to identify (i.e., “keep track of”) different transactions between each other (typically read and write operations). The OX-ID and RX-ID identifiers do not identify a particular device; they identify a particular transaction between two devices. They assist Host and target devices in organizing and differentiating different transactions or “exchanges” between the two devices.

The Examiner admits that Mullendore, the primary reference, does not teach or suggest such exchange identifiers. (Office Action, pages 4 and 11.) However, the Examiner asserts that Kaul, the secondary reference, teaches these exchange identifiers. The Examiner cites the following paragraphs of Kaul in support of this argument:

[0023] Whenever a call terminal inside LAN 110 wants to send a packet outside LAN 110, it forwards the packet to NAT 108. The IP header of the packet uses the local address of the call terminal for the source address of the packet. NAT 108 receives the packet on its local interface, *modifies the IP header of the packet to change the source address to the global address of LAN 110*, and then sends the packet to network 112.

[0024] Whenever a packet for a call terminal within LAN 110 is received by NAT 108 at its global address interface, it uses the combination of global address and the port number at which it received the data to map it to a local address and port number for the destination call terminal within LAN 110. Before forwarding the packet to the destination call terminal within LAN 110, *NAT 108 changes the destination address in the IP header from the global address to the local address of the destination call terminal in LAN 110*. Once this is done, NAT 108 forwards the packet to the appropriate destination call terminal in LAN 110. (Emphasis added).

However, these paragraphs do nothing more than describe well known Network Address Translation (NAT) protocols, which protocols have nothing to do with exchange identifiers. In fact, as can be seen from the cited section itself, Kaul makes no mention of exchange identifiers. Kaul does perform a type of translation, but the translation only concerns the network addresses of the end devices. It does not concern exchanges or exchange identifiers.

In addition to the above, Applicants incorporate herein all the remarks made in the pre-appeal brief request for review, filed on October 5, 2009, responding to the present Final Office Action.

For at least the above reasons, the Applicants respectfully submit that Mullendore and Kaul do not teach the elements of the independent claims, either alone or in combination. In view of the foregoing, the Applicants respectfully request that the rejections of independent claims 1, 24, 27, 29, and 30, and their dependent claims, be withdrawn.

Should the examiner believe that a telephone conference would expedite the prosecution of this application, applicant's attorney requests that the examiner contact him at the telephone number below.

Applicants hereby petition for any (additional) extension of time that may be required to maintain the pendency of this case, and any required fee for such extension or any further fee required in connection with the filing of this amendment is to be charged to Deposit Account No. 504480 (Order No. ANDIP037).

Respectfully submitted,
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